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Corporate Digital Responsibility in the Hospitality Industry

By Peter Jones* & Daphne Comfort+

The emerging digital technologies are reshaping and disrupting traditional business practices throughout the hospitality industry, and companies face, and may have to address, several new responsibility issues as they adopt these technologies. However, the issue of corporate digital responsibility within the hospitality industry has received limited attention, in the academic literature and this paper looks to make a small contribution to addressing that gap the literature. The paper outlines the characteristics of corporate digital responsibility, provides a short literature review, to give some context and points of reference for the paper, reviews the some of the responsibility issues hospitality companies face as they increasingly look to adopt digital technologies, and offers some concluding reflections.

Keywords: corporate digital responsibility, hospitality industry, digital technologies, privacy and cybersecurity, digital inclusion

Introduction

Many commentators increasingly suggest that the emergence and continuing development of digital technologies, including artificial intelligence, big data analytics, virtual and augmented reality, the Internet of Things, robotics, and blockchain, is reshaping and disrupting traditional business practices throughout the hospitality industry. Writing under the *Hospitality Net* banner, Gumerov (2019), for example, argued "as new technologies evolve and market disruptors reach their critical mass, every industry faces the need for a core transformation. The hospitality industry is no exception". On the one hand, these new technologies have provided a major threat to many companies within the industry, not least in that many traditional business models and operations are becoming increasingly redundant. On the other hand, in enthusiastically embracing the opportunities offered by digital technologies, many existing, and new, businesses are claiming to be reaping a wide range of benefits.

Digital technologies are becoming more commonplace within the hospitality industry and some simple examples provide illustrations of the ways they are being used, for example, in a growing number of hotels. Artificial intelligence systems are being used to analyse revenue management data and to build individual customers' preferences into personalised marketing messages. Chatbots enable hotel companies to respond automatically to large numbers of routine questions and calls for information from customers, and this may, in turn, enable companies to reduce labour demands and free up available staff time for more complex tasks. The Internet of Things is enabling a growing number of hotels to use smart energy systems to reduce the power of lighting systems, or to automatically switch off heating systems, when rooms or spaces are unoccupied. Virtual reality is being employed in marketing within the industry in that it offers the virtual experience of a hotel and its facilities, or of a tourist attraction, to potential customers before they make a booking. More generally, big data analytics offers improvements in both inventory and workforce management, increased market efficiency and enhanced customer experiences, while blockchain, a ledger of all transactions across a network, looks to offer hotels secure and personalised payment systems and greater provenance of their supply chains.

However, companies that introduce these new technologies may have to address new sets of responsibilities to their businesses, their shareholders, their employees, as well as to society at large, and to the environment. Here, Andersen (2019) argued that companies should treat "corporate digital responsibility with the highest strategic priority, helping to create positive futures not only for their businesses but also for the societies they are part of". That said, to date, corporate digital responsibility in the hospitality industry has not been addressed adequately in the academic literature. With these thoughts in mind this paper reviews some of the responsibility issues hospitality companies may face, and look to address, as they adopt digital technologies. As such, the paper looks to make a small contribution to addressing what is currently a gap in the hospitality literature on the digital technologies, and while it is not a conventional academic paper, it offers an exploratory review of some of the digital responsibility challenges hospitality companies may need to address as they increasingly engage with digital technologies. The paper provides a literature review, to give some context and points of reference for the paper, reviews the some of the issues hospitality companies face as they increasingly look to adopt digital technologies, and offers some concluding reflections.

Literature Review

There is no generally agreed definition of corporate digital responsibility. Lobschat et al. (2021), described corporate digital responsibility as a "novel concept", and defined it as "the set of shared values and norms guiding an organization's operations with respect to the creation and operation of digital technology and data". For Schneevoigt (2020), corporate digital responsibility is a "a voluntary commitment", which "starts with the need to conform to legal requirements and standards —

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for handling customer data, confidential, intellectual property and so on — but it also extends to wider ethical considerations and the fundamental values that an organization operates by". More simply, Driesens (2017) argued that corporate digital responsibility "is about making sure new technologies — and data in particular — are used both productively and wisely". ConPolicy (2020), the German research and consulting company, argued "corporate digital responsibility means that companies take responsibility for the consequences of their business processes, products and services, for employees, suppliers, customers, society as a whole, and the environment".

In looking to identify the scope of corporate digital responsibility, Wade (2020) suggested it "spans four areas — social, economic, technological, and environmental — that should be merged under one organizational umbrella". More specifically, Wade (2020) argued that the social dimension, for example, "involves an organization's relationship to people and society. The vital topic of data privacy and the protection of customers, employees, and other stakeholders is included in this area. It also incorporates aspects of digital diversity and inclusion, such as bridging an increasing divide between digital haves and have-nots across geographies, industries, social classes, and age demographics". The economic dimension, "concerns responsible management of the economic impacts of digital technologies" and looks to explore "how companies share the economic benefits of digitization with society through taxation of digital work, and if, and how, the original owners of monetized data are fairly compensated" (Wade 2020).

Driesens (2017) argued "as the world becomes more digital, companies will be faced with an ever-growing need to adopt a robust corporate digital responsibility approach to protect both customers and employees". More assertively, Lobschat et al. (2020) argued "organizations must determine how to operate responsibly in the digital age". For ConPolicy (2020), the business case for companies addressing corporate digital responsibility revolves around enhancing reputation, creating competitive advantage, motivating employees, and shaping its own future. In looking to explain the growing importance of corporate digital responsibility, Driesens (2017) identified "four drivers", namely, "the increasing concerns from customers and governments about the use and abuse of personal data; the impact and challenges of automation and robotics; the potential for unethical use of new technologies; and finally, the so-called digital divide".

More generally, Grigore et al. (2017) suggested that "a consideration of new responsibilities that are emerging from digital technologies" is "almost entirely absent in corporate social responsibility research". More specifically, Grigore et al. (2017) went on to identify some of these new responsibilities relating to "commodities, contractual agreements and ownership; exploitation of immaterial labor and fair distribution of rewards; access and equality; and the use of low cost labor and/or artificial intelligence". However, research on digital corporate responsibility is emerging in the academic literature. Lobschat et al. (2021), for example, highlighted the distinction between corporate digital responsibility and corporate social responsibility, and looked to shed light on "how an organization's shared values and norms regarding corporate digital responsibility can get translated into actionable guidelines for users". In synthesising their discussions, Lobschat et al. (2021) introduced "a comprehensive framework that helps academics and managers to build a corporate digital responsibility culture". At the same time, Suchacka (2020), who described corporate digital responsibility as "a new dimension of the human-technology relationship", warned that the dynamic nature of digital development meant that both "businesses and employees have less time to thoroughly examine social consequences of ongoing implications related to digitalisation".

However, to date, limited academic work has been published on the hospitality industry's approach to digital responsibility, and it is not yet possible to identify distinct research fields. That said, the work cited below provides some illustration of the variety of research on the digital technologies within the hospitality industry. Hristoforova et al. (2019) for example, examined how digital technologies improved marketing communications in tourism and hospitality enterprises. The authors concluded that the continuing development of digital technologies would expand the range, and improve the efficiency, of information services available to customers. Mariani (2019) outlined the evolution of big data analytics in the hospitality and tourism industry and suggested that it promised to enhance other digital technologies, including artificial intelligence and the Internet of Things, that rely heavily on data. The author concluded that big data "will be increasingly adopted to enrich and corroborate research designs and generate findings that could be generalizable across different geographical and social settings" (Mariani 2019).

Onder and Gunter (2020) emphasised the importance of examining the impact of blockchain on the hospitality and tourism industry. More specifically the authors suggested that the industry needed to concentrate not on the technology itself, but on how it can be used to benefit both consumers and suppliers while also creating new hospitality and tourism products and services. Ruel and Njoku (2020) looked to explore how artificial intelligence technologies have "redefined the hospitality industry" and to evaluate its impact on employee engagement, retention, productivity, and talent management and to examine its implications for service quality and customer satisfaction, within the industry. Bezvesilnaya et al. (2020) explored economic and legal aspects of digital technology development in the tourism and hospitality industry and suggested that these technologies will allow customers to readily obtain reliable information about tourism and hospitality services and that this will, in turn, increase market efficiency within the industry.

Having recognised the need for the hospitality industry to adopt a digital perspective, Buyukozkan et al. (2019) explored how SERVQUAL, could be adapted to provide a new service quality model for the digital era. Yang et al. (2019) explored

the application of artificial intelligence and robotics technology on companies, and on their employees and customers, within the hospitality industry. Nayyar et al. (2018) offered an analysis of the potential applications of virtual reality and augmented reality technologies within the hospitality and tourism industries and highlighted future opportunities for the industry as such technologies evolve. Adeyinka-Ojo et al. (2020) identified the digital literacy and employability skills that students and educators need to develop to better understand, and to negotiate, the changing digitally focused landscape of the hospitality and tourism industry. Efimova and Rhoznova (2018) examined the effects of data and technology on reporting in the digital economy. By way of an overall summary, Klimova and Glumova (2020) argued that digital technologies are changing the landscape of the tourism and hospitality industry and that "global digitalization dictates the need to adapt all business processes to it".

On the conceptual side, while there have been attempts to theorise digital labour (e.g., Fuchs and Sandoval 2014; Flanagan 2018), little or no work has been undertaken to theorise corporate digital responsibility. However, conceptual approaches merit attention, not least in that Rhou and Singal (2020) argued that "hospitality studies are largely a-theoretical" and suggested there was "a need for greater engagement with theory, and for more theory testing, within the hospitality industry literature". That said, a variety of theories have been used to shed light on corporate social responsibility within the hospitality industry. Indeed, Raimi (2017) identified "eight dominant theories of corporate social responsibility", namely "shareholder/agency, stakeholder, legitimacy, instrumental, social contract, conflict, green and communication, theories", with "diverse applications in the hospitality industry", which might provide a starting point for theoretical work on the hospitality industry's approach to corporate digital responsibility.

Digital Responsibilities within the Hospitality Industry

As companies within the hospitality industry increasingly engage with the emerging digital technologies, so they may need to address the responsibilities associated with these technologies. Such responsibilities are wide ranging, though interlinked, and embrace people, the economy, and the planet (e.g., Wade 2020). Hospitality companies' digital responsibilities towards people include its employees and employees at its suppliers, its customers and society at large. Corporate digital responsibilities to the economy include the hospitality companies themselves, their stakeholders, their suppliers, and their relationships with states, and to intergovernmental initiatives. Responsibilities to the planet embrace a wide range of environmental sustainability agendas including climate change, greenhouse gas emissions and the transition to a low carbon economy, energy use, waste management and pollution control. More specifically, several corporate digital responsibility issues, can be identified, including privacy and cybersecurity, the digital divide, trust and responsible data stewardship, and environmental sustainability.

The high profile issues of privacy and cybersecurity loom large in corporate, political, and social debate, and customers and companies are often in the front line (e.g.,Kumar 2020). Many of the companies within the hospitality industry have complex ownership structures spanning large corporations, franchisors, individual owners and operators, and management companies, all of whom may have different computer systems and may transport data between such systems, which can increase the vulnerability of such data. At the same time, high levels of staff turnover within the industry may often make it difficult for hospitality companies to ensure all staff are familiar with the company's privacy and cybersecurity compliance procedures and know how to incorporate such procedures into their regular computer based work routines.

Large international hotel groups that process large volume of financial transactions, run loyalty programmes, and maintain data bases containing sensitive customer data, might certainly be seen to be vulnerable to data breaches. More specifically large hotel groups may be vulnerable to malicious software, that can access, corrupt, or destroy computer systems, to sophisticated hacking, which tracks a customer's travel plans and then uses the hotel's Wi-Fi to contact specific guests to gain access to sensitive information, and to point of sale card payment attacks, which target the customer rather than the hotel. Security software and constant surveillance offer some protection against such data breaches but the dynamic and sophistication nature of criminal activity in this area makes comprehensive security virtually impossible.

The collection of personal data is seen to be vitally important in the hospitality industry to enable companies to develop relationships with their customers, but the safety and security of such data is paramount, and this demands a strategic approach to the collection, storage, and usage of data (e.g.,Wainstein 2020). While hospitality companies generally collect three types of customer data, namely, personal data, preference data and transaction data, cybercriminals are normally interested in personal data, data on financial transactions, and more specifically credit card numbers, and it is vitally important that hospitality companies know where, and how, such data is stored. Where this data is stored on a company's software system it may be accessible to a range of employees, not all of whom may have received training on data security, and untrained

employees can, effectively unknowingly, export data from such systems, through unsecured channels, putting that data immediately at risk. The high levels of staff turnover mentioned above, may make it difficult for hospitality companies to ensure that all its employees are always well trained. Cloud based software offers greater security but here hospitality companies need to satisfy themselves as to the reputation, and resources, of the operators they use to host their data.

The digital divide, simply defined as the gap between those who have access to computers and the Internet, and those who have no, or at best limited, access, poses responsibility issues for hospitality companies (e.g., Withiam 2021). On the one hand, as during the COVID-19 pandemic, for example, restaurants, fast food outlets and bars that advise customers to use mobile applications to book tables and to order food and drinks, may lose business opportunities if some of their customers do not have access to, or are unable to operate, the required digital applications. Given such a loss of business opportunities, companies can be seen to have a corporate responsibility, to their owners and shareholders, to find ways to include, rather than to exclude, such potential customers within their market. Facilitating such inclusion may effectively be beyond the vision and the resources of hospitality companies, but companies might look to emphasise the availability of other ways of booking, and to offering alternative booking and ordering systems, while at the same time promoting the simplicity and user friendliness of their digital applications.

On the other hand, where hospitality companies are committed to staff development, then they may look to provide all employees with opportunities to develop their digital technology skills and knowledge bases, as part of corporate inclusion and equal opportunities programmes. However, the high levels of staff turnover within the hospitality industry mentioned above, may reduce the effectiveness of corporate investment in digital technology training, and may deter many companies from pursuing comprehensive and inclusive staff development activities. More generally, some large hospitality companies, particularly those with extensive operations in developing countries, may consider committing themselves to philanthropic digital inclusion programmes which look to develop digital technology skills for young people, especially for females, in local schools.

Trust, and the responsible use of data, are fundamental issues. While artificial intelligence may offer a range of benefits for the hospitality industry, it also has its problems. Some commentators have called into question the use of artificial intelligence systems in employee recruitment, for example, arguing that such systems do not provide fair and equitable employment practices, not least because there are concerns that they can discriminate against females and some ethnic groups. While blockchain claims to provide a secure and permanent record of all transactions, it effectively shifts the onus of trust from people and companies to the cryptography, computers, networks, and algorithms as well as to the people who drive the system, and there are serial potential failure points along the way.

The adoption of digital technologies by hospitality companies also raises several environmental issues (e.g., Rajagopal 2019). The growing use of digital technologies is contributing to increases in carbon dioxide emissions and energy consumption. Here data centres, which house computing and networking equipment used to collect, store, process, distribute, and access large volumes of data, generate large amounts of heat, and power is required to prevent overheating and to cool down the equipment. Attempts to reduce energy use include locating new data centres in colder environments, making greater use of renewable sources of energy, and reusing waste heat for local community use. Data centres use large volumes of water in the cooling process, and in some areas where water is scarce, this can reduce the water available to communities and their economies.

At the same time, the production of many of the devices, and much of the equipment, that underpin the use of digital technologies, requires rare earth elements, often referred to as the lanthanides (USGS 2014). The current methods of mining these elements cause pollution and environmental degradation. At the other end of the digital technology life cycle the disposal of such devices and equipment, at landfill sites or by recycling companies, often based in less developed countries where environmental protection regulations are often less restrictive, can lead to a variety of environmental, and human health, problems. While hospitality companies are often not publicly seen to be directly involved in causing the environmental problems outlined above, their increasing use of digital technologies certainly makes them contributors to such problems.

Conclusion

This exploratory paper has outlined some of the challenges that hospitality companies may face, and seek to address, as they adopt digital technologies. These challenges include privacy and cybersecurity, digital inclusion, trust and the responsible use of data, and the environmental footprint of these digital technologies. The continuing development of the existing digital technologies, and the emergence of new ones, seem likely to present an evolving set of corporate digital responsibility challenges for companies within the hospitality industry. For a variety of economic and organisational reasons, it is generally, but not universally, the larger hospitality companies that have been leading on the integration of digital technologies within their business operations. Such companies may well also be the leaders in developing strategic approaches to digital responsibility within the industry, not least in that they believe that such approaches will help to give them a competitive

advantage in the marketplace. Nevertheless, as local smaller, independent companies begin to engage with digital technologies, so they too would be advised to embrace digital responsibility in their business plans.

More generally, two wider sets of issues merit reflection and discussion, namely, the relationship between economic growth and sustainability, and the thorny issue of whose best interests are served by corporate digital responsibility. Firstly, economic efficiencies and continuing growth are certainly seen to be important in driving the adoption of the digital technologies within the hospitality industry. However, the introduction of some of these new technologies can be seen to be at odds with wider sustainable development goals and agendas. On the one hand, the digital technologies may be employed by companies to replace or reduce the number of their employees, while on the other hand the increasing use of such technologies may have damaging, and ultimately irreversible, environmental consequences.

Secondly, there are issues about whose best interests are served by corporate digital responsibility. The hospitality industry looks, almost exclusively, to emphasise the responsible use of digital technologies as a force for good in bringing a wide range of benefits for customers, with little or no reference to the negative consequences of such new technologies. More widely this, in turn, raises some deeper concerns about the how corporate commitments to digital responsibility play out within modern societies. At the company level, corporate digital responsibility might be seen to be important in promoting and facilitating business strategies and may effectively, if not formally, be giving hospitality companies, licence to operate. At a wider level, there are arguments that companies pursue corporate digital responsibility policies and programmes to present a socially responsible image that legitimises their business activities to their stakeholders, and more widely within society. Hanlon and Fleming's (2009), wider arguments that "corporate social responsibility is good business in that it serves to affirm the legitimacy of the companies" and "this is important in the context of the widespread cynicism and political opposition that corporations have attracted in the last few years" certainly resonate.

Finally, the authors recognise that this exploratory review of the corporate digital responsibility challenges facing the hospitality industry has its limitations, not least in that it raises more issues than it resolves, but they believe the paper helps to fill a gap in the hospitality literature. At the same time, the paper provides some thoughts for those businesses within the hospitality industry who are making increasing use of digital technologies and serves as a platform for future research. On the business side, as companies increasingly adopt digital technologies so they might be advised to seek consultancy advice to identify their digital responsibilities and to put plans in place to ensure that they look to meet such responsibilities. On the academic side future research might, for example, focus on how the major hospitality companies address, and report on, digital corporate responsibilities, and on if, and how, their stakeholders contribute to the development of corporate digital development, and to the reporting process. Research may also examine how hospitality companies communicate their policies on digital responsibility to a range of stakeholders, and if, and how, such policies influence consumer patronage. At the same time, research on approaches to corporate digital responsibilities within the hospitality industry will offer opportunities to develop theoretical work within the discipline.

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